IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	§	ATTORNEY DOCKET NO.:
Parish, Bart P.	§	**1214-700USPT**
	§	
Serial No.: **10/757,828**	§	Confirmation No.: **5508**
	§	
Filed: **January 15, 2004**	§	Examiner: **Butler, Patrick Neal**
	§	
For: METHOD AND SYSTEM FOR MANUFACTURING COMBUSTIBLE PRODUCTS	§	Art Unit: **1791**
	§	
	§	
	§	

APPEAL BRIEF

Board of Patent Appeal and Interferences
United States Patent and Trademark Office
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Appeal Brief is submitted in support of the Appeal of the Examiner's final rejection of Claims 2, 3, 7-21, 30-32 and 34-53 in the above-identified application. A Notice of Appeal was filed in this case electronically on September 8, 2010 and received in the United States Patent and Trademark Office on that same date. Please charge the fee of $270.00 due under 37 C.F.R. §1.17(c) for filing the brief, as well as any additional required fees, in accordance with the fee worksheet filed herewith. Any additional fees which may be required may be charged to Deposit Account No. 50 3468.

REAL PARTIES IN INTEREST

The real party in interest in the present case is Balcones Recycling, Inc. ("*Appellant*"). The assignment of this application from the inventor to the Appellant was recorded in the U.S. Patent and Trademark Office on June 18, 2004 at Reel 015485, Frame 0363.

RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to Appellant, or the Appellant's legal representative, which directly affect or would be directly affected by or have a bearing on the Board's decision in the pending appeal.

STATUS OF CLAIMS

The above-identified application was filed with 33 claims. Claims 1, 4-6, 22-29 and 33 were previously canceled without prejudice. Claims 34-53 were previously added. Accordingly, Claims 2, 3, 7-21, 30-32, and 34-53 are pending in the application and stand rejected by the Examiner as noted in the Final Office Action dated March 8, 2010 (the "*Final Office Action*"). The rejection of Claims 2, 3, 7-21, 30-32, and 34-53 is appealed. A current version of the pending claims is set forth in the attached Appendix A in accordance with 37 C.F.R. 41.37(c)(1)(viii).

STATUS OF AMENDMENTS

No amendments to the claims have been filed or entered subsequent to the final rejection.

SUMMARY OF THE CLAIMED SUBJECT MATTER

The claimed invention relates to a method and system for manufacturing combustible products from a feedstock consisting essentially of theremoplasitc material, cellulosic fibers or combinations thereof. A summary of the subject matter defined in each independent claim involved in this appeal is provided below with reference to Appellant's original specification (the "*Specification*") by page and line number and to the drawings by reference characters as required by 37 C.F.R. § 41.37(c)(1)(v). In addition, every means plus function and step plus function as permitted by 35 U.S.C. 112, sixth paragraph, is identified and the structure, material, or acts described in the specification as corresponding to each claimed function is set forth by reference

to the original specification by page and line number, and to the drawings, if any, by reference characters as required by 37 C.F.R. § 41.37(c)(1)(v).

Claim 2

Independent Claim 2 of the present invention recites a method for making combustible products from recyclable materials (*Specification*, page 4, line 22 to page 5, line 1). The method comprises blending feedstock, wherein said feedstock consists essentially of thermoplastic material, cellulosic fibers or combinations thereof (*Specification*, page 5, line 15-16); inputting said blended feedstock into a grinder for the purpose of reducing the size of said blended feedstock, wherein said grinder operates at a torque of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft (*Specification*, page 8, line 16); compressing and extruding said reduced blended feedstock through a cuber so as to create combustible products (*Specification*, page 9, line 1-5); and monitoring the temperature of said combustible products for purposes of fire prevention (*Specification*, page 10, line 1-3).

Claim 3

Independent Claim 3 of the present invention recites a method for making combustible products from recyclable materials (*Specification*, page 4, line 22 to page 5, line 1). The method comprises blending feedstock, wherein said feedstock consists essentially of thermoplastic material, cellulosic fibers or combinations thereof (*Specification*, page 5, line 15-16); inputting said blended feedstock into a grinder for the purpose of reducing the size of said blended feedstock, wherein said grinder operates at a speed of between about 75 to about 80 rpms (*Specification*, page 8, line 15); compressing and extruding said reduced blended feedstock through a cuber so as to create combustible products (*Specification*, page 9, line 1-5); and monitoring the temperature of said combustible product for purposes of fire prevention (*Specification*, page 10, line 1-3).

Claim 7

Independent Claim 7 of the present invention recites a method for preparing combustible products from thermoplastic material and cellulosic fibers (*Specification*, page 4, line 22 to page

5, line 1). The method comprises selecting feedstock consisting essentially of thermoplastic material, cellulosic fibers or combinations thereof (*Specification*, page 5, line 15-16); feeding said feedstock through a size reduction apparatus, wherein said size reduction apparatus operates at a torque of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft (*Specification*, page 8, line 16); feeding said reduced feedstock through a cuber, including forcing said feedstock through die holes to form combustible products (*Specification*, page 9, line 1-5); and monitoring the temperature of said combustible product for purposes of fire prevention (*Specification*, page 10, line 1-3).

Claim 12

Independent Claim 12 of the present invention recites a method for manufacturing a combustible product (*Specification*, page 4, line 22 to page 5, line 1). The method comprises supplying feedstock into a grinder, wherein said feedstock consists essentially of thermoplastic material, cellulosic fibers or combinations thereof (*Specification*, page 5, line 15-16); grinding said feedstock at a torque of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft (*Specification*, page 8, line 16); feeding said ground feedstock through a cuber to form combustible products (*Specification*, page 9, line 1-5); and monitoring the temperature of said combustible products for purposes of fire prevention (*Specification*, page 10, line 1-3).

Claim 17

Independent Claim 17 of the present invention recites a method for manufacturing a combustible product (*Specification*, page 4, line 22 to page 5, line 1). The method comprises supplying feedstock into a grinder, wherein said feedstock consists essentially of thermoplastic material, cellulosic fibers or combinations thereof (*Specification*, page 5, line 15-16); grinding said feedstock at a torque of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft (*Specification*, page 8, line 16); feeding said ground feedstock through a cuber to form combustible products (*Specification*, page 9, line 1-5); and monitoring the temperature of said combustible products for purposes of fire prevention (*Specification*, page 10, line 1-3).

Claim 30

Independent Claim 30 of the present invention recites a method for manufacturing a combustible product (*Specification*, page 4, line 22 to page 5, line 1). The method comprises supplying feedstock into a grinder, wherein said feedstock consists essentially of thermoplastic material, cellulosic fibers or combinations thereof (*Specification*, page 5, line 15-16); grinding said feedstock at a torque of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft (*Specification*, page 8, line 16); feeding said ground feedstock through a cuber to form combustible products (*Specification*, page 9, line 1-5); monitoring the operational characteristics of said grinder and said cuber using a software application, wherein said operational characteristics can be monitored and controlled using said application (*Specification*, page 10, line 16 to page 11, line 5); and monitoring the temperature of said combustible product for purposes of fire prevention (*Specification*, page 10, line 1-3).

Claim 34

Independent Claim 34 of the present invention recites a method for making combustible products from recyclable materials (*Specification*, page 4, line 22 to page 5, line 1). The method comprises blending feedstock, wherein said feedstock consists essentially of thermoplastic material, cellulosic fibers or combinations thereof (*Specification*, page 5, line 15-16); inputting said blended feedstock into a grinder for the purpose of reducing the size of said blended feedstock, wherein said grinder operates at a torque of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft (*Specification*, page 8, line 16); compressing and extruding said reduced blended feedstock through a cuber so as to create combustible products (*Specification*, page 9, line 1-5); and monitoring the temperature of said combustible products for purposes of fire prevention (*Specification*, page 10, line 1-3).

Claim 35

Independent Claim 35 of the present invention recites a method for making combustible products from recyclable materials (*Specification*, page 4, line 22 to page 5, line 1). The method

comprises blending feedstock, wherein said feedstock consists essentially of thermoplastic material, cellulosic fibers or combinations thereof (*Specification*, page 5, line 15-16); inputting said blended feedstock into a grinder for the purpose of reducing the size of said blended feedstock, wherein said grinder operates at a speed of between about 75 to about 80 rpms (*Specification*, page 8, line 15); compressing and extruding said reduced blended feedstock through a cuber so as to create combustible products (*Specification*, page 9, line 1-5); and monitoring the temperature of said combustible products for purposes of fire prevention (*Specification*, page 10, line 1-3).

Claim 36

Independent Claim 36 of the present invention recites a method for preparing combustible products from thermoplastic material and cellulosic fibers (*Specification*, page 4, line 22 to page 5, line 1). The method comprises selecting feedstock consisting essentially of thermoplastic material, cellulosic fibers or combinations thereof (*Specification*, page 5, line 15-16); feeding said feedstock through a size reduction apparatus, wherein said size reduction apparatus operates at a torque of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft (*Specification*, page 8, line 16); feeding said reduced feedstock through a cuber, including forcing said feedstock through die holes to form combustible products (*Specification*, page 9, line 1-5); and monitoring the temperature of said combustible products for purposes of fire prevention (*Specification*, page 10, line 1-3).

Claim 41

Independent Claim 41 of the present invention recites a method for manufacturing a combustible product (*Specification*, page 4, line 22 to page 5, line 1). The method comprises supplying feedstock into a grinder, wherein said feedstock consists essentially of thermoplastic material, cellulosic fibers or combinations thereof (*Specification*, page 5, line 15-16); grinding said feedstock at a torque of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft (*Specification*, page 8, line 16); feeding said ground feedstock through a cuber to form combustible products (*Specification*, page 9, line 1-5); and monitoring the temperature of said combustible products for purposes of fire prevention (*Specification*, page 10, line 1-3).

Claim 46

Independent Claim 46 of the present invention recites a method for manufacturing a combustible product (*Specification*, page 4, line 22 to page 5, line 1). The method comprises supplying feedstock into a grinder, wherein said feedstock consists essentially of thermoplastic material, cellulosic fibers or combinations thereof (*Specification*, page 5, line 15-16); grinding said feedstock at a torque of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft (*Specification*, page 8, line 16); feeding said ground feedstock through a cuber to form combustible products (*Specification*, page 9, line 1-5); and monitoring the temperature of said combustible products for purposes of fire prevention (*Specification*, page 10, line 1-3).

Claim 51

Independent Claim 51 of the present invention recites a method for manufacturing a combustible product (*Specification*, page 4, line 22 to page 5, line 1). The method comprises supplying feedstock into a grinder, wherein said feedstock consists essentially of thermoplastic material, cellulosic fibers or combinations thereof (*Specification*, page 5, line 15-16); grinding said feedstock at a torque of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft (*Specification*, page 8, line 16); feeding said ground feedstock through a cuber to form combustible products (*Specification*, page 9, line 1-5); monitoring the temperature of said combustible products for purposes of fire prevention (*Specification*, page 10, line 1-3); and monitoring the operational characteristics of said grinder and said cuber using a software application, wherein said operational characteristics can be monitored and controlled using said application (*Specification*, page 10, line 16 to page 11, line 5).

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The Examiner has rejected Claims 2, 3, 7, 8, 12, 13, 17, 18, 34-37, 41, 42, 46 and 47 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,017,475 issued to Cantrell ("*Cantrell*") in view of U.S. Patent No. 3,547,577 issued to Lovercheck et al. ("*Lovercheck*") and the Examiner has rejected Claims 30-32 and 51-53 under 35 U.S.C. 103(a) as being unpatentable

over *Cantrell* in view of *Lovercheck* and in further view of U.S. Patent No. 4,789,507 issued to Wesley et al. ("*Wesley*").

ARGUMENT

The Examiner's decision that Appellant's Claims 2, 3, 7-21, 30-32, and 34-53 are unpatentable over *Cantrell* in view of *Lovercheck* (and in further view of *Wesley* with respect to Claims 30-32 and 51-53) should be overturned on appeal for at least the following reasons.

I. THE EXAMINER HAS NOT DEMONSTRATED THAT APPELLANT'S FEEDSTOCK ELEMENT WAS INDEPENDENTLY KNOWN IN THE PRIOR ART.

Courts have long held that "a patent comprised of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." *KSR Int'l Co. v. Teleflex Inc.,* 550 U.S. 398, 418 (2007) (citing *United States v. Adams,* 383 U.S. 39 (1966)). In order to establish obviousness, the prior art references must describe and enable the claimed invention in sufficient clarity and detail to establish that the claimed matter already existed in the prior art. *Elan Pharms. Inc. v. Mayo Found. For Med. Educ. Research*, 364 F.3d 1051, 1055 (Fed. Cir. 2003). Here, however, the *Final Office Action* fails to demonstrate that a feedstock consisting "essentially of thermoplastic material, cellulosic fibers or combinations thereof" was known in the prior art.

A. Cantrell does not teach a feedstock consisting essentially of thermoplastic material, cellulosic fibers or combinations thereof because Cantrell's feedstock is combined with rubbish.

Each of Appellant's independent claims includes the limitation that the "feedstock consists essentially of thermoplastic material, cellulosic fibers or combinations thereof" which is not taught by *Cantrell*. Appendix A, Claims 2, 3, 7, 12, 17, 30, 34, 35, 36, 41, 46, and 51. In contrast, *Cantrell* teaches the use of a feedstock consisting of both "garbage" and "rubbish." *Cantrell*, Col. 1, lines 25-30 ("The present invention is primarily directed to the reduction, conversion, decomposition, and destructive distillation of garbage and rubbish (hereinafter *collectively defined as 'household garbage.')*"); *Cantrell*, Abstract ("The method of transforming *household garbage* into useful material comprises the steps of: *providing a quantity of household garbage* having a first volume and a liquid content; reducing the garbage having a

first volume to an aggregate shard having a second volume smaller then [sic] the first volume; optionally expelling liquid from the aggregate shard; and heating the aggregate shard under pressure greater than ambient pressure to create an aggregate shard pulp."); *Cantrell*, Col. 11, lines 64-65 ("[h]ousehold garbage...is introduced into a hammer mill..."). *Cantrell* defines "garbage" as "decomposable wastes from food" and defines "rubbish" as "decomposable wastes, either combustible (such as paper, wood, and cloth) or non-combustible (such as metal, glass, and ceramics)." *Cantrell*, Col. 1, lines 13-16. Because *Cantrell* is combining decomposable waste from food with rubbish, it does not teach a feedstock consisting essentially of thermoplastic material, cellulosic fibers or combinations thereof.

M.P.E.P. § 2143.03 requires that, to establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested in the prior art. *In re Royka*, 490 F.2d 981 (CCPA 1974) (emphasis added). In order to establish obviousness, the prior art references must describe and enable the claimed invention *in sufficient clarity and detail* to establish that the claimed matter already existed in the prior art. *Elan Pharms. Inc. v. Mayo Found. For Med. Educ. Research*, 364 F.3d 1051, 1055 (Fed. Cir. 2003). *Cantrell* simply does not provide "sufficient clarity and detail" required by the Federal Circuit to render obvious a feedstock consisting essentially of thermoplastic material, cellulosic fibers or combinations thereof.

Because neither *Cantrell*, *Lovercheck* nor *Wesley* disclose the limitation that "feedstock consists essentially of thermoplastic material, cellulosic fibers or combinations thereof" as claimed by Appellant, *Cantrell* in view of *Lovercheck* and in further view of *Wesley* fails to teach, disclose or render obvious at least this distinguishing feature of independent Claims 2, 3, 7, 12, 17, 30, 34, 35, 36, 41, 46, and 51 and, by dependency, Claims 8-11, 13-16, 18-21, 31, 32, 37-40, 42-45, 47-50, 52 and 53. Consequently, Appellant respectfully requests that the above-referenced rejection be overturned with respect to Claims 2, 3, 7-21, 30-32, and 34-53.

B. Cantrell does not teach a "feedstock consisting essentially of thermoplastic material, cellulosic fibers or combinations thereof" because Cantrell's feedstock contains a substantial amount of water.

The *Final Office Action* erroneously concludes that:

> "Cantrell's volumetric reduction of 30-75% does not specify that the debulking is solely due to water removed. The debulking

would be due to rearranging the material to take up less space via converting to shard form (see col. 12, lines 5-11). Thus, no minimum of water is required in *Cantrell's* garbage." *Final Office Action*, page 10.

The position that no water is required in the process taught by *Cantrell* is not consistent with plain reading of *Cantrell* as demonstrated by the following excerpts:

1. "The art to which the invention relates ... can be described as a wet-pulping process of grinding solid waste magnetically freed from iron particles, supplied with sewage sludge or water, fractionated into portions of different size and treated in a fermentation process for about 24 hours. Various solvents and reactant solutions or materials are then used to transform the compost." *Cantrell*, Col. 3, line 61 – col. 4, line 4.
2. *Cantrell* specifically states that the art to which its invention relates incorporates "select elements" of "distillation" and "wet-pulping". *Cantrell*, Col. 4, lines 18-22. It cannot be clearer that water is inherent in the feedstock.
3. "The expeller unit 14 is provided to remove water and liquid substances from the shard." *Cantrell*, Col. 12, lines 20-21. If no water were required in *Cantrell*'s garbage, *Cantrell* would not teach the inclusion of an expeller for removing water and liquid substances.
4. "In yet another embodiment of the process of the present invention, the liquids and solutions (i.e. water and water-based solutions) extracted from the expeller are then separated to remove the trace amounts of oils, if any, from the water-based solutions." *Cantrell*, Col. 10, lines 47-51. Since *Cantrell* affirmatively states that liquids and solutions are extracted from the expeller (i.e., it only uses the words "if any" to qualify the amount of oil present), liquids must be required in the feedstock.
5. "As the tunnel is restricted, the shard is squeezed within the confines of the tunnel to force moisture from the shard prior to its exit from the expeller unit." *Cantrell*, Col. 12, lines 17-20. Again, if no water were required in *Cantrell*'s garbage, *Cantrell* would not teach the inclusion of an expeller for removing water and liquid substances.

6. "The method further includes: capturing the liquid expelled from the shard; separating the captured liquid into an oil solution and a water-based solution; centrifuging the water based solution and removing the solid material therefrom; sterilizing the solid material removed from the water-based solution; drying the aggregate cellulose pulp..." *Cantrell*, Col. 10, lines 48-51.
7. Fig. 1 shows "Liquid Solution" being removed from the expeller and Fig. 2 shows an "H2O Solution" being fed into the centrifuge. *Cantrell*, Fig. 1 and Fig. 2. If water is not present in the *Cantrell*'s process, there would be no need to remove a "liquid solution" from the expeller and the feed into the centrifuge would not be characterized as an "H2O Solution."
8. "The system of the present invention can be summarized in a variety of ways, one of which is the following: a system for transforming household garbage having a first volume into useful material, comprising: a grinder for reducing the volume of the household garbage to a shard; *an expeller for extracting liquids from the shard...*" *Cantrell*, Col. 11, lines 28-33 (emphasis added). If the process taught by *Cantrell* did not include liquid, there would be no need for the expeller.

Even if *Cantrell*'s feedstock were to consist of a disproportionately large amount of thermoplastic material of cellulosic fibers, *Cantrell's* teachings referenced above make it clear that its feedstock would still include a substantial amount of liquid and cannot, therefore, be said to "consist essentially of thermoplastic material, cellulosic fibers or combinations thereof" as claimed by the Appellant.

In order to establish obviousness, the prior art references must describe and enable the claimed invention *in sufficient clarity and detail* to establish that the claimed matter already existed in the prior art. *Elan Pharms. Inc. v. Mayo Found. For Med. Educ. Research*, 364 F.3d 1051, 1055 (Fed. Cir. 2003) (emphasis added). *Cantrell* teaches a process incorporating a "wet-pulping process" and does not teach a process wherein the feedstock consists essentially of thermoplastic material, cellulosic fibers or combinations thereof as claimed by the Appellant. *Cantrell*, Col. 4, lines 18-22.

Because neither *Cantrell*, *Lovercheck* nor *Wesley* disclose the limitation that "feedstock consists essentially of thermoplastic material, cellulosic fibers or combinations thereof" as claimed by Appellant, *Cantrell* in view of *Lovercheck* and in further view of *Wesley* fails to

teach, disclose or render obvious at least this distinguishing feature of independent Claims 2, 3, 7, 12, 17, 30, 34, 35, 36, 41, 46, and 51 and, by dependency, Claims 8-11, 13-16, 18-21, 31, 32, 37-40, 42-45, 47-50, 52 and 53. Consequently, Appellant respectfully requests that the above-referenced rejection be overturned with respect to Claims 2, 3, 7-21, 30-32, and 34-53.

II. APPELLANT'S OPERATING TORQUE RANGE IS NOT OBVIOUS BECAUSE THE PROBLEM OF GRINDING APPELLANT'S FEEDSTOCK WAS PREVIOUSLY UNKNOWN.

The Federal Circuit has held that even where a general method that could have been applied to make a claimed product was known and within the level of skill of the ordinary artisan, the claim may nevertheless be nonobvious if the problem which had suggested use of the method had been previously unknown. *In re Omeprazole Patent Litigation*, 535 F.3d 1361 (Fed. Cir. 2008). In *In re Omeprazole Patent Litigation*, even though sub-coatings for enteric drug formulation were known, and there was no evidence of undue technical hurdles or lack of a reasonable expectation of success, the applicant's formulation of sub-coating was nevertheless not obvious because the flaws in the prior art formulation that had prompted modification had not been recognized. *Id.* Thus, the Federal Circuit concluded that there would have been no reason to modify the initial formulation, even though the modification could have been done. *Id.*

The *Final Office Action* acknowledges that *Cantrell* does not disclose a grinder operating at "a torque of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft," as claimed by Appellant in independent Claims 2, 7, 12, 17, 34, 36, 41, 46, and 51. *Final Office Action*, page 4. However, the *Final Office Action* reasons that, because *Cantrell* teaches that the grinder operates at a rated velocity depending upon the configuration of the machine used and that it rotates so that the work piece is ground to the desired shape, size, and finish, *Cantrell* "obviously" recognizes that the grinder operating torque is a result-effective variable because "given that the velocity and material are ground properly, the torque would be a function of these variables." *Final Office Action*, page 4. Based on this reasoning, the *Final Office Action* concludes that "one of ordinary skill in the art would have obviously determined the optimum grinder operating torque through routine experimentation." *Final Office Action*, page 5.

As with the unrecognized problem in *In re Omeprazole Patent Litigation*, however, the torque required for processing garbage containing a substantial amount of liquid would have been of little concern for *Cantrell*. Because the garbage going into *Cantrell*'s grinder is made up

of 25 – 70% liquid, it would have a very low viscosity which could be processed with very low torque. One of ordinary skill in the art would not have recognized that the constant velocity grinder used by *Cantrell* to process a low viscosity feedstock would have required adjustments to the torque. There would be no need to optimize the torque and there would certainly be no need to optimize the torque in the range of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft.

A review of *Cantrell* reveals that there is no mention of, or reference to, torque. *Cantrell* does not disclose or suggest that torque is a result-effective variable or in any way relevant for achieving the desired velocity. Although the discovery of an optimum value of a result-effective variable in a known process is ordinarily within the skill of the art, one of the long-standing exceptions to this rule is when the parameter optimized was not recognized in the prior art as one that would affect the results. *See, e.g., Ex parte Malathy*, 2003 WL 21279935 (Bd. Pat. App. & Interf. 2003) ("We do not see any evidence in the record to support the Examiner's position that the pH is a known result-effective variable in this situation. There is simply no teaching or suggestion in the evidence of record to adjust the pH of a colorant blend or to achieve a particular pH range as here claimed.")(emphasis added); *Ex Parte Alsop,* 2001WL863722 (Bd. Pat. App. & Interf. 2001) (finding that, because the cited reference does not disclose or suggest that number average molecular weight is a result-effective variable or in any way relevant for achieving effective peritoneal dialysis, it was not a result-effective variable)(emphasis added); *In re Antonie*, 559 F.2d 618, 620 (CCPA 1977); *Ex parte Datta, et al.*, 2008WL4759864, (Bd. Pat. App. & Interf. 2008); *Ex parte Tilton*, 2008WL533791, (Bd. Pat. App. & Interf. 2008) ("While it may ordinarily be the case that determination of optimum values for the parameters of a prior art process would be at least be prima facie obvious, that conclusion depends upon what the prior art discloses with respect to those parameters.")

When there is no evidence in the record to support the Examiner's position that the parameter is a result-effective variable, the variable cannot be deemed to be result-effective. *See, e.g., Ex Parte Hofer, et al.*, 2008 WL 5232773 (Bd. Pat. App. & Interf. 2008). *Cantrell* did not recognize torque as a result-effective variable because *Cantrell* was concerned with grinding garbage with a high liquid content. The low viscosity garbage feedstock taught by *Cantrell* could be processed at a constant velocity with little if any change in the torque. By contrast, when processing a feedstock consisting essentially of thermoplastic material, cellulosic fibers or

combinations thereof, the torque may vary considerably depending on the proportion of thermoplastic material and cellulosic fibers be processed in the grinder at any particular time. *Specification*, page 10, lines 11-16 (listing "moisture content of the feedstock" as a highly dependent variable in Appellant's process). If the feedstock is particularly dense, the torque will increase as the grinder works to process the material. In short, there is simply no suggestion or teaching in *Cantrell* by which one of ordinary skill in could have predicted that torque was a result-effective variable through the processing of garbage with a high liquid content. Moreover, the foregoing discussion makes it clear that processing of low viscosity household garbage with a high water content in *Cantrell* would require substantially different torque than a mixture of thermoplastic material and cellulosic fibers as claimed by Appellant.

Because neither *Cantrell*, *Lovercheck* nor *Wesley* teach or disclose the limitation of a grinder operating at "a torque of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft" as claimed by Appellant, *Cantrell* in view of *Lovercheck* and in further view of *Wesley* fails to render obvious at least this distinguishing feature of independent Claims 2, 7, 12, 17, 34, 36, 41, 46, 51 and, by dependency, Claims 8-11, 13-16, 18-21, 37-40, 42-45 and 47-50, 52, and 53. Consequently, Appellant respectfully requests that the above-referenced rejection be overturned with respect to Claims 2, 7-21, 34, and 36-53.

III. THE EXAMINER HAS FAILED TO PROVE PRIMA FACIE OBVIOUSNESS WITH RESPECT TO APPELLANT'S OPERATING TORQUE RANGE.

KSR International Co. v. Teleflex Inc. requires that an Examiner provide "some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR Int'l Co. v. Teleflex Inc.*, at 418 (2007). The Examiner must "identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does." *Id.* The Examiner must make "explicit" this rationale of "the apparent reason to combine the known elements in the fashion claimed," including a detailed explanation of "the effects of demands known to the design community or present in the marketplace" and "the background knowledge possessed by a person having ordinary skill in the art." *Id.* Anything less than such an explicit analysis is not sufficient to support a prima facie case of obviousness.

In the present case, the Examiner has not articulated a reason with some rational underpinning sufficient to support the legal conclusion that Appellant's operating torque range "of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft" is obvious in view of *Cantrell* and *Lovercheck*. *Final Office Action*, page 4. The Examiner states that *Cantrell* teaches that the grinder operates at a rated velocity depending upon the configuration of the machine used and that it rotates so that the work piece is ground to the desired shape, size, and finish. *Final Office Action*, page 4. The Examiner then concludes that *Cantrell* "obviously" recognizes that the grinder operating torque is a result-effective variable because "given that the velocity and material are ground properly, the torque would be a function of these variables." *Final Office Action*, page 4. However, the Examiner has not stated, nor would it be evident to one of skill in the art, *why* grinder operating torque would be optimized at between about 18,000 and about 20,000 ft-lbs of torque per motor shaft.

When it is not obvious why a result-effective variable would be optimized within a certain range, the invention cannot be deemed to be obvious. *See, e.g., Ex Parte Hofer, et al.*, 2008 WL 5232773 (Bd. Pat. App. & Interf. 2008) (finding that the Examiner has failed to show obviousness where the Examiner had not established an evidentiary basis for optimizing the diacrylic acid content to the value and theoretical plate position in a column as required by claim 1. "Even were diacrylic acid to have been recognized as a result-effective variable whose optimal value would have been routinely discovered by persons of ordinary skill in the art, the Examiner has not provided a reason to have required it to be above or equal to 550 ppm. ... Thus, it is not evident why the skilled worker would have sought to optimize the concentration of diacrylic acid in the rectification column above a certain threshold.").

In the present case, *Cantrell* does not suggest or teach any reason why the torque would be optimized at between about 18,000 and about 20,000 ft-lbs of torque per motor shaft as claimed by the Appellant. Accordingly, the Examiner has failed to establish that the Appellant's invention is obvious in view of *Cantrell*. The Examiner simply concludes that *Cantrell* "obviously" recognizes that the grinder operating torque is a result-effective variable because "given that the velocity and material are ground properly, the torque would be a function of these variables." Such an unfounded conclusion cannot, and does not support an obviousness rejection. See, e.g., *Ex Parte Datta, et al.*, 2008 WL 4371720, (Bd. Pat. App. & Interf. 2008) ("Finally, the Examiner's conclusion that it would have been obvious to use first and second

polymeric materials having the claimed flexural modulus as a matter of routine optimization of result-effective variables cannot be sustained without some articulated underlying basis. It is readily apparent that as a material's stiffness increases its flexibility generally decreases. However, the Examiner has not factually established general conditions of stiffness and/or flexibility in the pant-like, prefastened, disposable absorbent article art or analogous art based on the teachings of Kline and/or Battrell and/or the knowledge of one of ordinary skill in the art. Instead, the Examiner merely concludes it would have been obvious to use first and second polymeric materials having the claimed flexural modulus because a flexible material is less stiff, less rigid or less hard.").

Because neither *Cantrell*, *Lovercheck* nor *Wesley* teach or disclose the limitation of a grinder operating at "a torque of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft" as claimed by Appellant, *Cantrell* in view of *Lovercheck* and in further view of *Wesley* fails to render obvious at least this distinguishing feature of independent Claims 2, 7, 12, 17, 34, 36, 41, 46, 51 and, by dependency, Claims 8-11, 13-16, 18-21, 37-40, 42-45 and 47-50, 52, and 53. Consequently, Appellant respectfully requests that the above-referenced rejection be overturned with respect to Claims 2, 7-21, 34, and 36-53.

IV. APPELLANT'S OPERATING SPEED RANGE IS NOT OBVIOUS BECAUSE THE PROBLEM OF GRINDING APPELLANT'S FEEDSTOCK WAS PREVIOUSLY UNKNOWN.

The Federal Circuit has held that even where a general method that could have been applied to make a claimed product was known and within the level of skill of the ordinary artisan, the claim may nevertheless be nonobvious if the problem which had suggested use of the method had been previously unknown. *In re Omeprazole Patent Litigation*, 535 F.3d 1361 (Fed. Cir. 2008). In *In re Omeprazole Patent Litigation*, even though sub-coatings for enteric drug formulation were known, and there was no evidence of undue technical hurdles or lack of a reasonable expectation of success, the applicant's formulation of sub-coating was nevertheless not obvious because the flaws in the prior art formulation that had prompted modification had not been recognized. *Id.* Thus, the Federal Circuit concluded that there would have been no reason to modify the initial formulation, even though the modification could have been done. *Id.*

The *Final Office Action* acknowledges that *Cantrell* does not disclose a grinder operating at a "speed of between about 75 and about 80 rpm," as claimed by Appellant in Claims 3, 8, 13, 18, 35, 37, 42, 47, and 53. *Final Office Action*, page 5. However, the *Final Office Action* reasons that because *Cantrell* teaches that the grinder operates at a rated velocity depending upon the configuration of the machine used and that it rotates so that the work piece is ground to the desired shape, size, and finish, *Cantrell* "obviously" recognizes that the grinder operating speed is a result-effective variable because "it rotates so that the work piece is ground to the desired shape, size and finish." *Final Office Action*, page 5. Based on this reasoning, the Final Office Action concludes that "one of ordinary skill in the art would have obviously determined the optimum grinder operating speed applied in the process of Cantrell through routine experimentation." *Final Office Action*, page 5.

As with the unrecognized problem in *In re Omeprazole Patent Litigation* and as discussed above with respect to torque, the speed required for a grinder to process garbage containing a substantial amount of liquid would have been of little concern for *Cantrell*. Because the garbage going into *Cantrell*'s grinder is made up of 25 – 70% liquid, it would have a very low viscosity which could be processed at any speed desired. There would be no need to optimize the speed since virtually any speed would work, and there would certainly be no need to optimize the speed in the range of between about 75 and about 80 rpm.

A review of *Cantrell* reveals that the only mention of grinder speed appears during a general discussion of commercially available grinders. In that paragraph, *Cantrell* states "Hammer mills incorporate a rotating drum, or spindle, with free-floating hammers. The hammer mill is designed to spin at a relatively high speed." *Cantrell*, Col. 9; lines 16-26. *Cantrell* does not disclose or suggest that grinder speed is a result-effective variable or in any way relevant for achieving the desired velocity. Although the discovery of an optimum value of a result-effective variable in a known process is ordinarily within the skill of the art, one of the long-standing exceptions to this rule is when the parameter optimized was not recognized in the prior art as one that would affect the results. *See, e.g.*, *Ex parte Malathy*, 2003 WL 21279935 (Bd. Pat. App. & Interf. 2003); *Ex Parte Alsop,* 2001WL863722, (Bd. Pat. App. & Interf. 2001); *In re Antonie*, 559 F.2d 618, 620 (CCPA 1977); *Ex parte Datta, et al.*, 2008WL4759864, (Bd. Pat. App. & Interf. 2008); *Ex parte Tilton*, 2008WL533791 (Bd. Pat. App. & Interf. 2008).

When there is no evidence in the record to support the Examiner's position that the parameter is a result-effective variable, the variable cannot be deemed to be result-effective. *See, e.g., Ex Parte Hofer, et al.*, 2008 WL 5232773 (Bd. Pat. App. & Interf. 2008). *Cantrell* did not recognize speed as a result-effective variable because *Cantrell* was concerned with grinding garbage with a high liquid content. *See Specification*, page 10, lines 11-16 (listing "moisture content of the feedstock" as a highly dependent variable in Appellant's process). The low viscosity garbage feedstock taught by *Cantrell* could be processed at any speed desired. In short, there is simply no suggestion or teaching in *Cantrell* by which one of ordinary skill in could have predicted that speed was a result-effective variable through the processing of garbage with a high liquid content. Moreover, the foregoing discussion makes it clear that processing of low viscosity household garbage with a high water content would operate at substantially different speeds than a mixture of thermoplastic material and cellulosic fibers.

Because neither *Cantrell*, *Lovercheck* nor *Wesley* teach or disclose the limitation of a grinder operating at a "speed of between about 75 and about 80 rpm," as claimed by Appellant, *Cantrell* in view of *Lovercheck* and in further view of *Wesley* fails to render obvious at least this distinguishing feature of Claims 3, 8, 13, 18, 35, 37, 42, 47, and 53. Consequently, Appellant respectfully requests that the above-referenced rejection be overturned with respect to such claims.

V. THE EXAMINER HAS FAILED TO PROVE PRIMA FACIE OBVIOUSNESS WITH RESPECT TO APPELLANT'S OPERATING SPEED RANGE.

KSR International Co. v. Teleflex Inc. requires that an Examiner provide "some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR Int'l Co. v. Teleflex Inc.*, at 418 (2007). The Examiner must "identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does." *Id.* The Examiner must make "explicit" this rationale of "the apparent reason to combine the known elements in the fashion claimed," including a detailed explanation of "the effects of demands known to the design community or present in the marketplace" and "the background knowledge possessed by a person having ordinary skill in the art." *Id.* Anything less than such an explicit analysis is not sufficient to support a prima facie case of obviousness.

In the present case, the Examiner has not articulated a reason with some rational underpinning sufficient to support the legal conclusion that Appellant's operating speed range "of between about 75 and about 80 rpm" is obvious in view of *Cantrell* and *Lovercheck*. *Final Office Action*, page 5. The Examiner states that *Cantrell* teaches that the grinder operates at a rated velocity depending upon the configuration of the machine used and that it rotates so that the work piece is ground to the desired shape, size, and finish. *Final Office Action*, page 5. The Examiner then concludes that *Cantrell* "obviously" recognizes that the grinder operating speed is a result-effective variable because the grinder "rotates so that the work piece is ground to the desired shape, size and finish." *Final Office Action*, page 5. However, the Examiner has not stated, nor would it be evident to one of skill in the art, *why* grinder operating speed would be optimized at between about 75 and about 80 rpm.

When it is not obvious why a result-effective variable would be optimized within a certain range, the invention cannot be deemed to be obvious. *See, e.g., Ex Parte Hofer, et al.*, 2008 WL 5232773 (Bd. Pat. App. & Interf. 2008). In the present case, *Cantrell* does not suggest or teach any reason why the speed would be optimized at between about 75 and about 80 rpm as claimed by the Appellant. Accordingly, the Examiner has failed to establish that the Appellant's invention is obvious in view of *Cantrell*. The Examiner simply concludes that *Cantrell* "obviously" recognizes that the grinder operating speed is a result-effective variable. Such an unfounded conclusion cannot, and does not support an obviousness rejection. See, e.g., *Ex Parte Datta, et al.*, 2008 WL 4371720 (Bd. Pat. App. & Interf. 2008).

Because neither *Cantrell*, *Lovercheck* nor *Wesley* teach or disclose the limitation of a grinder operating at a "speed of between about 75 and about 80 rpm," as claimed by Appellant, *Cantrell* in view of *Lovercheck* and in further view of *Wesley* fails to render obvious at least this distinguishing feature of Claims 3, 8, 13, 18, 35, 37, 42, 47, and 53. Consequently, Appellant respectfully requests that the above-referenced rejection be overturned with respect to such claims.

With the above arguments, Appellant has shown why the claimed invention is not suggested by the above combination of references and that he has pointed out the deficiencies in Examiner's rejection. The above rejection is therefore not well founded and should be reversed.

CONCLUSION

In conclusion, for the arguments of record and the reasons set forth above, all pending claims of the subject application continue to be in condition for allowance and Appellant seeks the Board's concurrence at this time. Appellant has pointed out with specificity the manifest error in the Examiner's rejections, and the claim language that renders the invention patentable over the combination of references. Appellant, therefore, respectfully requests that this case be remanded to the Examiner with instructions to issue a Notice of Allowance for all pending claims.

Respectfully submitted,
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APPENDIX A

2. A method for making combustible products from recyclable materials comprising:

blending feedstock, wherein said feedstock consists essentially of thermoplastic material, cellulosic fibers or combinations thereof;

inputting said blended feedstock into a grinder for the purpose of reducing the size of said blended feedstock, wherein said grinder operates at a torque of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft;

compressing and extruding said reduced blended feedstock through a cuber so as to create combustible products; and

monitoring the temperature of said combustible products for purposes of fire prevention.

3. A method for making combustible products from recyclable materials comprising:

blending feedstock, wherein said feedstock consists essentially of thermoplastic material, cellulosic fibers or combinations thereof;

inputting said blended feedstock into a grinder for the purpose of reducing the size of said blended feedstock, wherein said grinder operates at a speed of between about 75 to about 80 rpms;

compressing and extruding said reduced blended feedstock through a cuber so as to create combustible products; and

monitoring the temperature of said combustible product for purposes of fire prevention.

7. A method for preparing combustible products from thermoplastic material and cellulosic fibers comprising:

selecting feedstock consisting essentially of thermoplastic material, cellulosic fibers or combinations thereof;

feeding said feedstock through a size reduction apparatus, wherein said size reduction apparatus operates at a torque of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft;

feeding said reduced feedstock through a cuber, including forcing said feedstock through die holes to form combustible products; and

monitoring the temperature of said combustible product for purposes of fire prevention.

8. The method of Claim **7** wherein said size reduction apparatus operates at a speed of between about 75 and about 80 rpms.

9. The method of Claim **7** wherein said thermoplastic material is selected from the group consisting of polyethylene, polypropylene, polystyrene, acrylonitrile-butadiene styrene, acetal copolymer, acetal homopolymer, acrylic, polybutylene and combinations thereof.

10. The method of Claim **7** wherein said feedstock is selected from the group consisting of byproducts from the production of disposable diapers, byproducts from the production of sanitary pads, byproducts from the production of adhesive liners, byproducts from the production of hospital gowns and combinations thereof.

11. The method of Claim **7** wherein said feedstock is selected from the group consisting of waste from the production of disposable diapers, waste from the production of sanitary pads, waste from the production of adhesive liners, waste from the production of hospital gowns and combinations thereof.

12. A method for manufacturing a combustible product comprising:

supplying feedstock into a grinder, wherein said feedstock consists essentially of thermoplastic material, cellulosic fibers or combinations thereof;

grinding said feedstock at a torque of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft;

feeding said ground feedstock through a cuber to form combustible products; and

monitoring the temperature of said combustible products for purposes of fire prevention.

13. The method of Claim **12** wherein said grinder operates at a speed of between about 75 and about 80 rpms.

14. The method of Claim **12** wherein said thermoplastic material is selected from the group consisting of polyethylene, polypropylene, polystyrene, acrylonitrile-butadiene styrene, acetal copolymer, acetal homopolymer, acrylic, polybutylene and combinations thereof.

15. The method of Claim **12** wherein said feedstock is selected from the group consisting of byproducts from the production of disposable diapers, byproducts from the production of sanitary pads, byproducts from the production of adhesive liners, byproducts from the production of hospital gowns and combinations thereof.

16. The method of Claim **12** wherein said feedstock is selected from the group consisting of waste from the production of disposable diapers, waste from the production of sanitary pads, waste from the production of adhesive liners, waste from the production of hospital gowns and combinations thereof.

17. A method for manufacturing a combustible product comprising:

supplying feedstock into a grinder, wherein said feedstock consists essentially of thermoplastic material, cellulosic fibers or combinations thereof;

grinding said feedstock at a torque of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft;

feeding said ground feedstock through a cuber to form combustible products; and

monitoring the temperature of said combustible products for purposes of fire prevention.

18. The method of Claim **17** wherein said grinder operates at a speed of between about 75 and about 80 rpms.

19. The method of Claim **17** wherein said thermoplastic material is selected from the group consisting of polyethylene, polypropylene, polystyrene, acrylonitrile-butadiene styrene, acetal copolymer, acetal homopolymer, acrylic, polybutylene and combinations thereof.

20. The method of Claim **17** wherein said feedstock is selected from the group consisting of byproducts from the production of disposable diapers, byproducts from the production of sanitary pads, byproducts from the production of adhesive liners, byproducts from the production of hospital gowns and combinations thereof.

21. The method of Claim **17** wherein said feedstock is selected from the group consisting of waste from the production of disposable diapers, waste from the production of sanitary pads, waste from the production of adhesive liners, waste from the production of hospital gowns and combinations thereof.

30. A method for manufacturing a combustible product comprising:

supplying feedstock into a grinder, wherein said feedstock consists essentially of thermoplastic material, cellulosic fibers or combinations thereof;

grinding said feedstock at a torque of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft;

feeding said ground feedstock through a cuber to form combustible products;

monitoring the operational characteristics of said grinder and said cuber using a software application, wherein said operational characteristics can be monitored and controlled using said application; and

monitoring the temperature of said combustible product for purposes of fire prevention.

31. The method of Claim **30** wherein said operational characteristics are selected from the group consisting of amperage draw of said grinder, the amperage draw of said cuber, the speed of said grinder, the heat generated in said grinder, the heat generated in said cuber, the speed of said grinder, the speed of said cuber, and the pressure required to perform the cubing operation.

32. The method of Claim **30** wherein said feedstock is ground at between about 75 and about 80 rpms.

34. A method for making combustible products from recyclable materials comprising:

blending feedstock, wherein said feedstock consists essentially of thermoplastic material, cellulosic fibers or combinations thereof;

inputting said blended feedstock into a grinder for the purpose of reducing the size of said blended feedstock, wherein said grinder operates at a torque of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft;

compressing and extruding said reduced blended feedstock through a cuber so as to create combustible products; and

monitoring the temperature of said combustible products for purposes of fire prevention.

35. A method for making combustible products from recyclable materials comprising:

blending feedstock, wherein said feedstock consists essentially of thermoplastic material, cellulosic fibers or combinations thereof;

inputting said blended feedstock into a grinder for the purpose of reducing the size of said blended feedstock, wherein said grinder operates at a speed of between about 75 to about 80 rpms;

compressing and extruding said reduced blended feedstock through a cuber so as to create combustible products; and

monitoring the temperature of said combustible products for purposes of fire prevention.

36. A method for preparing combustible products from thermoplastic material and cellulosic fibers comprising:

selecting feedstock consisting essentially of thermoplastic material, cellulosic fibers or combinations thereof;

feeding said feedstock through a size reduction apparatus, wherein said size reduction apparatus operates at a torque of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft;

feeding said reduced feedstock through a cuber, including forcing said feedstock through die holes to form combustible products; and

monitoring the temperature of said combustible products for purposes of fire prevention.

37. The method of Claim **36** wherein said size reduction apparatus operates at a speed of between about 75 and about 80 rpms.

38. The method of Claim **36** wherein said thermoplastic material is selected from the group consisting of polyethylene, polypropylene, polystyrene, acrylonitrile-butadiene styrene, acetal copolymer, acetal homopolymer, acrylic, polybutylene and combinations thereof.

39. The method of Claim **36** wherein said feedstock is selected from the group consisting of byproducts from the production of disposable diapers, byproducts from the

production of sanitary pads, byproducts from the production of adhesive liners, byproducts from the production of hospital gowns and combinations thereof.

40. The method of Claim **36** wherein said feedstock is selected from the group consisting of waste from the production of disposable diapers, waste from the production of sanitary pads, waste from the production of adhesive liners, waste from the production of hospital gowns and combinations thereof.

41. A method for manufacturing a combustible product comprising:

supplying feedstock into a grinder, wherein said feedstock consists essentially of thermoplastic material, cellulosic fibers or combinations thereof;

grinding said feedstock at a torque of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft;

feeding said ground feedstock through a cuber to form combustible products; and

monitoring the temperature of said combustible products for purposes of fire prevention.

42. The method of Claim **41** wherein said grinder operates at a speed of between about 75 and about 80 rpms.

43. The method of Claim **41** wherein said thermoplastic material is selected from the group consisting of polyethylene, polypropylene, polystyrene, acrylonitrile-butadiene styrene, acetal copolymer, acetal homopolymer, acrylic, polybutylene and combinations thereof.

44. The method of Claim **41** wherein said feedstock is selected from the group consisting of byproducts from the production of disposable diapers, byproducts from the production of sanitary pads, byproducts from the production of adhesive liners, byproducts from the production of hospital gowns and combinations thereof.

45. The method of Claim **41** wherein said feedstock is selected from the group consisting of waste from the production of disposable diapers, waste from the production of sanitary pads, waste from the production of adhesive liners, waste from the production of hospital gowns and combinations thereof.

46. A method for manufacturing a combustible product comprising:

supplying feedstock into a grinder, wherein said feedstock consists essentially of thermoplastic material, cellulosic fibers or combinations thereof;

grinding said feedstock at a torque of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft;

feeding said ground feedstock through a cuber to form combustible products; and

monitoring the temperature of said combustible products for purposes of fire prevention.

47. The method of Claim **46** wherein said grinder operates at a speed of between about 75 and about 80 rpms.

48. The method of Claim **46** wherein said thermoplastic material is selected from the group consisting of polyethylene, polypropylene, polystyrene, acrylonitrile-butadiene styrene, acetal copolymer, acetal homopolymer, acrylic, polybutylene and combinations thereof.

49. The method of Claim **46** wherein said feedstock is selected from the group consisting of byproducts from the production of disposable diapers, byproducts from the production of sanitary pads, byproducts from the production of adhesive liners, byproducts from the production of hospital gowns and combinations thereof.

50. The method of Claim **46** wherein said feedstock is selected from the group consisting of waste from the production of disposable diapers, waste from the production of

sanitary pads, waste from the production of adhesive liners, waste from the production of hospital gowns and combinations thereof.

51. A method for manufacturing a combustible product comprising:

supplying feedstock into a grinder, wherein said feedstock consists essentially of thermoplastic material, cellulosic fibers or combinations thereof;

grinding said feedstock at a torque of between about 18,000 and about 20,000 ft-lbs of torque per motor shaft;

feeding said ground feedstock through a cuber to form combustible products;

monitoring the temperature of said combustible products for purposes of fire prevention; and

monitoring the operational characteristics of said grinder and said cuber using a software application, wherein said operational characteristics can be monitored and controlled using said application.

52. The method of Claim **51** wherein said operational characteristics are selected from the group consisting of amperage draw of said grinder, the amperage draw of said cuber, the speed of said grinder, the heat generated in said grinder, the heat generated in said cuber, the speed of said grinder, the speed of said cuber, and the pressure required to perform the cubing operation.

53. The method of Claim **51** wherein said feedstock is ground at between about 75 and about 80 rpms.

EVIDENCE APPENDIX

None

RELATED PROCEEDINGS APPENDIX

None